

IN THE CLAIMS

1. (Original) Fire resistant polyolefin blends which comprise of a blend of (i) a polyolefin base polymer (ii) melamine or its derivative (iii) a flame retardant and (iv) a compatibilizer all put together constitute 100 wt% of the blend.

2. (Original) Blends as claimed in claim 1, wherein the said polyolefin comprises polypropylene homopolymer, polyethylene, more preferably a high density polyethylene, random as well as block copolymers of propylene and ethylene.

3. (Original) Blends as claimed in claim 1, wherein the said polyolefin polymer has a melt flow index in the range of 12 to 40 g/10 min. when tested at 230°C at 2.16 kg load (according to ASTM D 1238).

4. (Original) Blends as claimed in claim 1, wherein the said melamine derivative is selected from melamine cyanurate or melamine phosphate.

5. (Currently Amended) Blends as claimed in ~~claims 1 to 4~~ claim 1, wherein the said melamine or its derivative is present in the concentration range 10 to 50 wt%.

6. (Currently Amended) Blends as claimed in ~~claims 1 to 5~~ claim 1, wherein the said flame retardant is selected from magnesium hydroxide and/or aluminum trihydroxide, zinc borate and ammonium phosphate.

7. (Currently Amended) Blends as claimed in ~~claims 1 to 6~~ claim 1, wherein the said flame retardant is present in the concentration range of 2 to 10 wt%.

8. (Currently Amended) Blends as claimed in ~~claims 1 to 7~~ claim 1, wherein the said compatibilizer comprises a maleic anhydride grafted polypropylene (MAH-g-PP) or an organo silane.

9. (Currently Amended) Blends as claimed in ~~claims 1 to 8~~ claim 1, wherein the said compatibilizer is present in an amount from 0 to 10-wt%.
10. (Currenrtly Amended) Blends as claimed in ~~any preceding claim~~ claim 1, wherein a processing aid such as a fluoroelastomer is present in the concentration range of 1 to 2 wt% over and above the total blend.
11. (Currently Amended) Blends as claimed in ~~above claims~~ claim 1, wherein an antioxidant is present in the concentration range of 0-3 wt% over and above the total blend.
12. (Original) A process for preparation of fire-resistant polyolefin blends, which comprise melt mixing of a polyolefin, melamine or its derivative, a flame retardant and a compatibilizer in a Buss co-kneader or a twin screw extruder.
13. (Original) A process as claimed in claim 12, wherein the said polyolefin comprises a polypropylene homopolymer, polyethylene, more preferably a high-density polyethylene, random as well as block copolymers of propylene and ethylene.
14. (Original) A process as claimed in claim 12, wherein the said polyolefin polymer has a melt flow index in the range of 12 to 40 g/10 min, when tested at 230°C at 2.16 kg load (according to ASTM D 1238).
15. (Currently Amended) A process as claimed in ~~any one of claims 12 to 14~~ claim 1, wherein the said melamine derivative is selected from melamine cyanurate or melamine phosphate.
16. (Currently Amended) A process as claimed in ~~any one of claims 12 to 15~~ claim 1, wherein the said melamine or its derivative is present in the concentration range 10 to 50 wt%.
17. (Currently Amended) Processes as claimed in ~~any one of claims 12 to 16~~ claim 1, wherein said flame retardant is selected from magnesium hydroxide and/or aluminum trihydroxide, zinc borate and ammonium phosphate.

18. (Currently Amended) A process as claimed in ~~any one of claims 12 to 17~~ claim 1, wherein the said flame retardant is present in the concentration range of 2 to 10 wt%

19. (Currently Amended) A process as claimed in ~~any one of claims 12 to 18~~ claim 1, wherein the said compatibilizer comprises a maleic anhydride grafted polypropylene (MAH-g-PP) or an organo silane.

20. (Currently Amended) A process as claimed in ~~any one of claims 12 to 19~~ claim 1, wherein the said compatibilizer is present in an amount from 0 to 10-wt%.

21. (Currently Amended) A process as claimed in ~~any one of claims 12 to 20~~ claim 1, wherein said melt mixing is carried out at a temperature in the range of 180 to 250°C in a Buss co-kneader or a twin screw extruder.

22. (Original) A process as claimed in claim 21, wherein said kneader/extruder speed is 50 to 100 rpm.

23. (Currently Amended) An article of manufacture whenever made of a fire-resistant polypropylene blend as claimed in ~~any one of claims 1 to 11~~ claim 1.